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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/829,162	04/22/2004	Hirofumi Dodoro	K06-169665M/TBS	5745
21254	7590	12/07/2005	EXAMINER	
MCGINN INTELLECTUAL PROPERTY LAW GROUP, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817			YEE, DEBORAH	
			ART UNIT	PAPER NUMBER
			1742	

DATE MAILED: 12/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/829,162	<b>Applicant(s)</b> DODORO ET AL.	
	<b>Examiner</b> Deborah Yee	<b>Art Unit</b> 1742	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 October 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2 and 5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1,2 and 5 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over machine-English translation of Japanese patent 2001-131712 cited by applicant in IDS dated 10-08-04.
4. The machine-English translation of JP'712 in Table 1 of paragraphs 19-20 discloses a specific bearing steel alloy example 1 which meets the composition recited by claims 1 and 2, and has a surface hardness at 58 HRC or more which is within HRC of at least 57 recited by claim 2. Also similar to present invention paragraph 35 of JP'712 teaches low-bearing noise during operation and hence would have excellent damping properties.
5. Moreover, according to JP'712 paragraph 22, bearing steel is manufactured by hardening comprising the steps of heating to 1050C followed by blast-cooling in a

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vacuum and then tempering, which closely meets the claimed process limitations. Even though prior art does not specifically teach oil cooling and then subzero cooling steel prior to tempering as recited by claim 1, such would not be a patentable difference.

Note that in a product-by-process claim, the patentability is determined by the product per se and not the process limitations. The burden falls to the applicant to show that any process steps associated with the claimed product result in a materially different product form those of the prior art because there is nothing in the record before the examiner to reasonably conclude that applicant's product differs in kind from those obtained by the reference. See MPEP 2113.

6. Claims 1, 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al (US Patent 5,998,042) or Tanaka et al (US Patent 6,086,686).

7. Tanaka'042 on lines 45 to 55 of column 6 and Tanaka'686 on lines 25 to 54 in column 6, each patent discloses a bearing steel alloy having a composition with constituents whose wt% ranges overlap those recited by claims 1 and 5; such overlap in wt% ranges establishes a prima facie case of obviousness because it would be obvious to one of ordinary skill in the art to select the claimed alloy wt% ranges over the broader disclosure of the prior art since the same utility (roller bearing) and similar properties (excellent acoustic characteristics) are taught, see MPEP 2144.05.

8. Moreover, Tanaka '042 on lines 45 to 60 in column 17 and Tanaka '686, lines 1 to 9 in column 26 disclose producing steel bearing in the same manner as recited in claim 1 comprising the steps of austenitizing, oil quenching, subzero cooling and tempering.

9. Also Tanaka'042 examples in Table 2A of column 18 and Tanaka '686 examples in Table 18 of column 42 have surface hardness values of at least 57HRC and hence meet claim 2.

### ***Response to Arguments***

10. Applicant's arguments filed 10-03-05 have been fully considered but they are not persuasive.

I. Applicant traversed the rejection based on JP'712

11. It was argued that JP'712 merely provides several alloys having exemplary amounts of Cr but fails to teach the specific range of 5 to 10%Cr recited by claim 1. Applicant points out that a specific range or other variable in a claim may provide patentable weight to a claim if the applicant can show that the particular range is important. In order to anticipate this claimed ratio, the specific limitation must be disclosed in the reference with "sufficient specificity to constitute an anticipation under the statute". It is the examiner's position that JP'712 discloses specific example 1 in table 1 containing 9.1% Cr and is within applicant's claimed Cr range of 5 to 10% which is sufficient specificity to constitute an anticipation. It is not required that JP'712 teach the entire range of 5 to 10%Cr to meet the present invention claim.

12. It was submitted that JP'712 does not teach that the specific range of 5 to 10% Cr improves the dampability of the damping steel as discovered by the present invention. It is the examiner's position that JP'712 discloses a hardened bearing steel alloy which meets the claimed composition and hardness value. Furthermore, in

paragraph 36 of the machine-English translation, JP'712 recognizes that by reducing the content of Cr to 9-11% and C to 0.35-0.45% and adding 0.08 to .2% N, the noise (damping property) at the time of operation can be suppressed. Hence similar to present invention, JP'712 controls Cr content to improve damping properties.

13. In regard to claimed process limitations, see explanation in paragraph 5.

II. Applicant traversed the rejection based on Tanaka'042 and Tanaka '686.

14. It was argued that Tanaka does not teach or suggest a damping steel including 5 to 10% Cr as recited by claim 1. It is the examiner's position that Takemura discloses a bearing steel containing 10 to 14% Cr which overlaps with applicant's newly claimed range of 5 to 10%Cr; hence a prima facie case of obviousness is established.

15. It was argued that applicant's claimed Cr range of 5 to 10% is critical to obtain improved damping properties. It is the examiner's position that since applicant has not demonstrated criticality for the Cr range of 5 to 10 % (e.g. by comparative test data), then claims would not patentably distinguish over prior art. Note that applicant's specification on page 4 discloses the preferred Cr ranges of 6 to 11% and 9 to 10% yet a broad Cr range of 5 to 15% is also permissible to improve damping property. Moreover the comparative test examples in Table 1 on page 8 of applicant's specification demonstrate the criticality of N being present but are inadequate to demonstrate the criticality of the Cr content. Hence claimed Cr range of 5 to 10% would not patentably distinguish over prior art.

16. It was argued that Tanaka patents do not teach the process limitations recited by claim 1. It is the examiner's position that Tanaka '042 on lines 45 to 60 in column 17 and Tanaka '686, lines 1 to 9 in column 26 disclose producing steel bearing in the same manner as recited in claim 1 comprising the steps of austenitizing, oil quenching, subzero cooling and tempering.

### ***Conclusion***

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

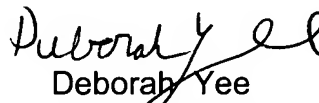
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-272-1253. The examiner can normally be reached on Monday-Friday from 6:00 to 3:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Deborah Yee  
Primary Examiner  
Art Unit 1742

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